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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,990	08/17/2001	Wen-Shi Huang	H010019	8682

34003 7590 05/20/2003

INTELLECTUAL PROPERTY SOLUTIONS, INCORPORATED  
5717 COLFAX AVENUE  
ALEXANDRIA, VA 22311

EXAMINER
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PATEL, NIHIR B

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 05/20/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/930,990

Applicant(s)

HUANG ET AL.

Examiner

Nihir Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 8-18 have been considered but are moot in view of the new ground(s) of rejection.

### *Drawings*

2. The corrected or substitute drawings were received on April 4<sup>th</sup>, 2003. These drawings are accepted.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8 and 10-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Budelman US Patent No. 6,244,331. Referring to claim 8, Budelman discloses a heatsink with integrated blower for improved heat exchanger that comprises a heat sink 410 (see figure 8) including a plurality of first cooling fins 428 (see figure 8) and a plurality of second cooling fins 430 (see figure 8), wherein an annular cavity 416 and 418 (see figure 8) is defined between the first cooling fins 428 and the second cooling fins; and a centrifugal fan 522, formed in the annular cavity 416 and 418 so as to be embedded into the heat sink 410.

Referring to claim 10, Budelman discloses a cover 534 formed on the heat sink and the centrifugal fan.

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Referring to claims 11, 16, and 21, Budelman discloses an annular cavity 416 and 418 that matches the centrifugal fan (see figure 8).

Referring to claims 12, 17, and 22, Budelman discloses cooling fins that are distributed under and around a region extending from central region of the centrifugal fan to a periphery of the centrifugal fan (see figure 8).

Referring to claims 13, 18, and 23, Budelman discloses a heat sink that is made of a material chosen from the group consisting of aluminum, aluminum alloy, copper, copper alloy, and the combination thereof (see column 4 lines 30-40).

Referring to claim 14, Budelman discloses a heatsink with integrated blower for improved heat exchanger that comprises a heat sink 410 (see figure 8), including a plurality of first cooling fins 428 and a plurality of second cooling fins 430 (see figure 8), wherein a cavity 416 and 418 (see figure 8) is defined between the first cooling fins 428 and the second cooling fins 428; a centrifugal fan 522, formed in the cavity so as to be embedded into the heat sink 410; and a cover 534 formed on the heat sink 410 and the centrifugal fan 522.

Referring to claim 19, Budelman discloses a heatsink with integrated blower for improved heat exchanger that comprises a heat sink 410 (see figure 8), including a plurality of first cooling fins 428 and a plurality of second cooling fins 430 (see figure 8), wherein a cavity 416 and 418 is defined between the first cooling fins 428 and the second cooling fins 430; a centrifugal fan 522, giving an axial direction and radial directions, disposed in the cavity 41 and 418 so as to be embedded into the heat sink 410; and a cover 534, including a plurality of inlets 550 disposed on the heat sink and the centrifugal fan 522, wherein air from ambiance is flowed

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in the axial direction of the centrifugal fan 522 into the heat sink 410 from the inlet of the cover, and is flowed in radial directions of the centrifugal fan out of the heat sink 410.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Budelman US Patent No. 6,244,331 in view of Miyahara et al. US Patent No. 5,940,268.

Budelman discloses the applicant's invention as claimed with the exception of providing a cover that serves as an air seal to keep airtight.

Miyahara discloses a heat sink and electronic device employing the same that does provide a cover that serves as an air seal to keep airtight (see figure 4). Therefore it would be obvious to modify Budelman's invention by providing a cover that serves as an air seal to keep airtight in order to reduce the size and to increase the cooling process.

*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nihir Patel whose telephone number is (703) 306-3463. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor Henry Bennett can be reached at (703) 308-0101

NP  
May 16, 2003

Henry Bennett  
Supervisory Patent Examiner  
6028709  
Henry Bennett  
Supervisory Patent Examiner